

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of: **Masaharu YAMAMOTO et al.**

Art Unit: **2818**

Application Number: **10/568,075**

Examiner: **Jonathan Han**

Filed: **February 13, 2006**

Confirmation Number: **7448**

For: **HERMETIC SEALING CAP, METHOD OF MANUFACTURING
HERMETIC SEALING CAP AND ELECTRONIC COMPONENT
STORAGE PACKAGE**

Attorney Docket Number: **062092**

Customer Number: **38834**

REPLY BRIEF

Mail Stop: Appeal Brief-Patents

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

February 8, 2011

In response to the Examiner's Answer mailed January 6, 2011, the following is the
Appellants' Reply Brief.

REMARKS

I. ARGUMENT

Responding to Appellants' argument in the Appeal Brief, the Examiner alleged as follows:

By utilizing the Ni-Co layer of Suzuki in layer 1 [14] of Levine as disclosed in the previous rejection in claim 1, the layer orientation is Ni-Co (layer [14] of Levine Figure 2), Ni [18], and Au [20]. This follows the orientation of the layer structure of claim 1. Furthermore, Suzuki supports this orientation by identifying the same issue of oxidizing corrosion. **By implementing this Ni-Co layer in the first layer, this controls diffusion of nickel components within the layer of gold** between the first and second layer which would cause a lower deterioration of the interior layers and preventing the body from becoming positively charged (see Suzuki, ¶[0033-0034] and Levine, Column 4, lines 41-64). This creates the hermetic sealing cap structure of claim 1. Furthermore, as stated in Levine, the multi-layered structure protects the inner layers from further deterioration and reduces EMF difference that causes diffusion of the inner layers therefore the second layer of Ni inherently inhibits the first layers from diffusing out into the solder layers (see Levine, Column 4, line 65- Column 5, line 8) as the same materials (Ni-Co and Co) are used as well as the same orientation of layers are implemented between the prior art and the instant case.

However, there is no reason for a person of ordinary skill in the art to apply the Ni-Co layer of Suzuki in layer 14 of Levine. The layer structure of Suzuki is completely different from that of Levine, and it is not clear why a person of ordinary skill in the art would utilize the Ni-Co layer of Suzuki in layer 14 of Levine.

Suzuki describes as follows:

[0033]

In this case, if the gold layer 11 is less than 0.1 μm , it tends to become difficult to effectively prevent the oxidation corrosion of the nickel layer 9

or the nickel cobalt layer 10. If the thickness exceeds 3 μm , when the metal lid body 2 is joined to the metallized layer 6 for closure by seam welding, the current which flows into the thick gold layer 11 increases while the current which flows into the metal lid body 2 decreases, and there is a possibility that melting of the solder material 8 may be barred and the intensity of junction may deteriorate. Therefore, it is preferred to make the thickness of said gold layer 11 in the range of 0.1 μm - 3 μm , and the range 0.1 μm - 2 μm is further preferred.

[0034]

According to the wiring board of this invention, because **the nickel cobalt layer 10 is formed directly under the gold layer 11, a cobalt component inhibits diffusion of nickel components, it rarely happens that some nickel of the nickel layer 9 or the nickel cobalt layer 10 diffuses through the gold layer 11**, being exposed on the surface of the gold layer 11 and oxidized to generates a nickel oxide and nickel hydroxide with poor wettability to the solder material 8; thus firm junction to the metallized layer 6 and the solder material 8 is constantly obtained.

(Suzuki, paragraph [0033]-[0034], revised from machine translated version). Thus, according to Suzuki, the Ni-Co layer 10 is formed directly under the Au layer 11 because a Co inhibits diffusion of Ni. In order to prevent diffusion of nickel into gold layer, Ni-Co layer has to come between the nickel layer and gold layer, making the order of the layers **Ni/ Ni-Co/Au**.

In contrast, according to claim 1, when the diffusion accelerator is Co, the order of the layers is **substrate/Ni-Co/Ni/Sn solder layer**. Thus, the order of the layers is different between Suzuki and the present invention. Moreover, the solder layer of Suzuki is not “mainly composed of Sn.”

Another reference, Levine describes at the portion cited above as follows:

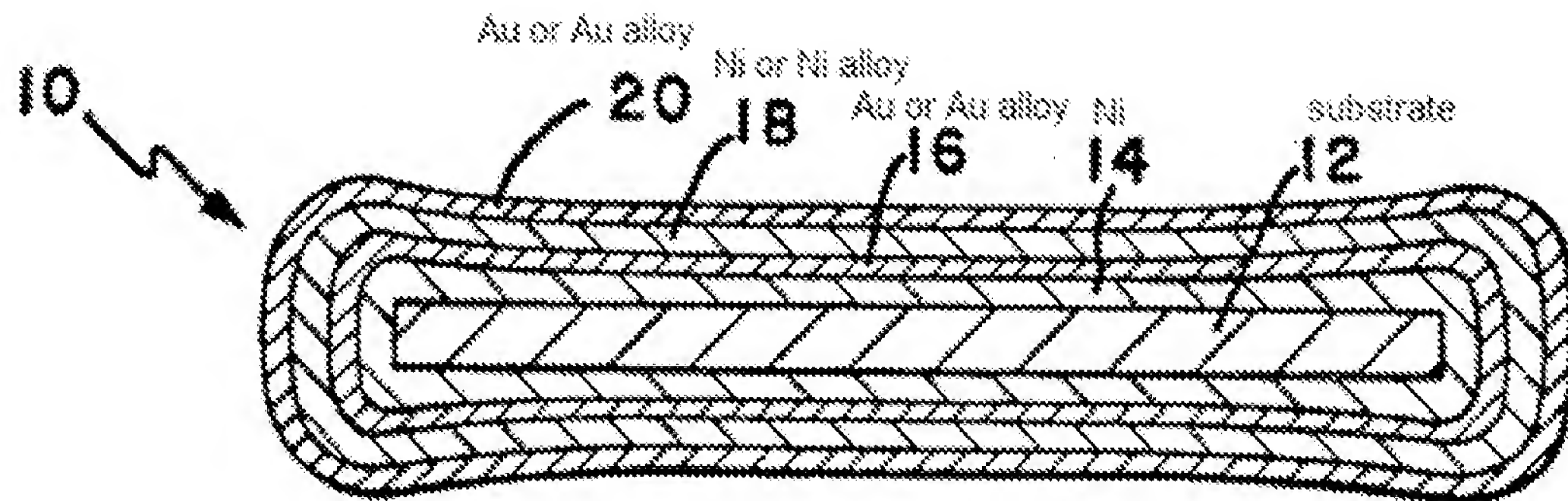
In contrast in the present invention, with the second nickel layer 18 and the second gold layer 20, there is no EMF difference between the two gold layers and there is no transport of iron ions, for example, to the surface of the second gold layer. This is because the nickel metal has a lower electromotive force than the gold. As soon as the channel is filled with metal oxides up to gold layer 16, the electrolyte becomes depleted and no

further corrosion action takes place. The channels are so small in diameter that with the stopping-off of galvanic action at gold layer 16, no observable corrosion is observed.

(Levine, Column 4, line 65- Column 5, line 8). Here, Levine discusses the stopping-off of galvanic action at gold layer 16. Levine also describes as follows:

A first layer 14 of nickel or a nickel based alloy is plated on the base material 12 by any conventional electroplating process, including barrel plating, strip plating, rack plating or a combination of such techniques. The so-called “dog-bone” thickness profile of barrel plating of **nickel layer 14** is shown in FIG. 1. The thickness of the nickel layer, measured at the center of layer 14, is preferably in the range of about 10 to 300 microinches, more preferably in the range of about 50 to 200 microinches. All references to the thickness of layers herein refer to the thickness at the center of the layer. Most preferably, the thickness of nickel of layer 14 is about 100 microinches. A **first layer 16 of gold or a gold based alloy** is plated on nickel layer 14 also by any conventional plating technique, although the profile of barrel plated part is shown in the drawing. The thickness of gold layer 16, is preferably in the range of about 5 to 150 microinches, more preferably about 10 to 75 microinches. Most preferably, the thickness of gold at the center of layer 16 is about 25 microinches. A **second layer 18 of nickel or a nickel based alloy** is plated onto gold layer 16 by an electroplating process, and preferably has a thickness in the ranges indicated for layer 14. Preferably, nickel layer 18 has approximately the same thickness as first nickel layer 14. A **second layer 20 of gold or a gold based alloy** is plated onto nickel layer 18 by an electroplating process, and preferably has a thickness in the range indicated for layer 16. Preferably, gold layer 20 has approximately the same thickness as first gold layer 16. The resulting product greatly minimizes corrosion when the part is subjected to a salt spray atmosphere.

(Levine column 4, lines 9-40).



Thus, Levine discusses Ni/Au/Ni/Au structure. Levine also describes as follows:

It has been surprisingly discovered that when a **second set of nickel and gold layers** is plated onto a base metal, with the total gold thickness being approximately the same as with a conventional nickel-gold plated part, **the corrosion resistance of the part is greatly improved.**

(Levine column 3, lines 27-31). Thus, according to this explanation Levine, there are at least two sets of nickel and gold layers. Such a layer structure is irrelevant to the layer structures of Suzuki and the present invention. Levine further describes as follows:

Also, the tendency for oxidation and corrosion to occur is more pronounced in plated layers which are relatively thin, and hence may be porous. In general, corrosion may occur with plated layers in which the plating thickness is less than about 500 microinches.

Preferably, the metals of the first and third layers are selected from the group of nickel, titanium, chromium, tin and their alloys. **Most preferably, the metal of the first and third layers, which act as diffusion barriers, is nickel.**

Also preferably, the metals of the second and fourth layers are selected from the group of gold, copper, silver, palladium, platinum or their alloys. Most preferably, the metal of the second and fourth layers, which act as corrosion resistant layers, is gold.

Preferably, the metals of the first and third layers are the same, and are plated to approximately the same thickness, and the metals of the second and fourth layers are the same, and are plated to approximately the same thickness.

(Levine column 6, lines 41-60). According to Levine, nickel layers are the barrier layers, and nothing indicates need of additional layer or Ni-Co layer between the nickel layer and the gold layer. Moreover, like Suzuki, Levine fails to layer structure which includes “a solder layer mainly composed of Sn.”

The Examiner alleged that “Kim discloses a solder layer mainly composed of Sn formed on a region of the surface of said second layer to which said electronic component storing member is bonded” referring to paragraph [0031]-[0032]. Kim et al. describes, at the cited portion, as follows:

[0031] The lid frame 2 may be formed of a transparent material, such as glass, quartz, or a material, such as Si, ceramic, and Kovar, and the junction layer 5 may be formed of Cr or Ti. Preferably, the wetting layer 6 is formed of Ni and Cu, and **the solder layer 7 is formed of at least one selected from In, Sn, Bi, Ag, and Zn**, and the first protection layer 8 is formed of Au. Also, the thickness of the first protection layer 8 is, preferably, but not necessarily, less than 1000Å.

[0032] The junction layer 5, the wetting layer 6, and the solder layer 7 are laminated through heat or e-beam evaporation, sputtering, electroplating, non-electrolysis deposition, and screen printing and are manufactured in a high vacuum apparatus so as to prevent the oxidation of each layer.

(Kim et al., paragraph [0031]-[0032]). Thus, Kim et al. simply describes Sn as an example of the materials to form a solder layer of a particular lid frame. As explained above, Suzuki addresses a particular metalized layer of Ni/Ni-Co/Au. Also, Levine discusses the particular layer structure Ni/Au/Ni/Au, or Ni/(Cu, Ag, Pd, Pt)/Ni/Au. Even a solder layer formed of Sn was known, it has nothing to do with the layer structures of Suzuki and Levine.

Therefore, even if Levine is combined with Suzuki and Kim et al., there is no reason for a person of ordinary skill in the art to make a sealing cap comprising “a substrate; a first layer, formed on the surface of said substrate, mainly composed of Ni containing a diffusion accelerator; a second layer formed to be in contact with the surface of said first layer; and a solder layer mainly composed of Sn formed on a region of the surface of said second layer to which said electronic component storing member is bonded, wherein said second layer is formed so as to inhibit said first layer from diffusing into said solder layer at a first temperature and diffuse said first layer into said solder layer through said second layer when said solder layer bonds to said electronic component storing member at a second temperature higher than said first temperature,” as recited in claim 1.

Further responding to Appellants’ argument in the Appeal Brief, the Examiner alleged as follows:

Appellant also argues that Examiner's allegations of the term "accelerator" ignores ordinary meaning and consistent use of the word. However, based on the definition of acceleration in physics and statistical mechanics, acceleration is the rate of change of velocity over time and does not necessitate the need for the system to increase in velocity as argued by the Appellant. Furthermore, Appellant's disclosure also keeps the acceleration of the system vague as to whether it is an increase or decrease in speed, but merely notes whether diffusion occurred or not. With no indication of increase in speed by the appellant in the disclosure (no rates or changes are provided), Examiner provided the same material utilized by the appellant for a diffusion accelerator (Cobalt; see rejection above, claim 1 and page 28 Paragraph 3 of the Appellant's specification). Therefore, it would be expected that based on the disclosure of the Appellant as well as the prior art of the record that Cobalt (Co) would function identically in both the combination of Levine, Suzuki, and Kim as the instant application.

However, the present invention would be related to chemical or material engineering rather than physics and statistical mechanics. Webster's Encyclopedic Unabridged Dictionary defines the term "accelerator" and the term "accelerate" as follows:

ac·cel·er·a·tor *n.* 1. a person or thing that accelerates, 2. *Auto.* a device, usually operated by the foot, for controlling the speed of an engine. 3. *Brit.* any two- or three-wheeled motor vehicle, as a motorcycle or motor scooter. 4. *Photog.* a chemical, usually an alkali, added to a developer to increase the rate of development. 5. Also called **accelerant**. *Chem.* any substance that increases the speed of a chemical change, as one that increases the rate of vulcanization of rubber or that hastens the of concrete, mortar, plaster, or the like. 6 *Anat., Physiol.* any muscle, nerve, or activating substance that quickens a movement. 7. Also called **atom smasher, particle accelerator**. *Physics.* an electrostatic or electromagnetic device, as a cyclotron, that produces high-energy particles and focuses them on a target. 8. *Econ.* See acceleration coefficient.

ac·cel·er·ate *v.t.* 1. to cause faster or greater activity, development, progress advancement, etc., in: *to accelerate economic growth*. 2. to hasten the occurrence of: *to accelerate the fall of a government*. 3. *Mech.* to change the velocity of (a body) or the rate of (motion); cause to undergo acceleration. 4. to reduce the time required for (a course of study) by intensifying the work, eliminating detail, etc. *-v.i.* 5. to move or go faster, increase in speed. 6. to progress or develop faster.

As seen in these definitions, the definition alleged by the Examiner appears to be limited to the fields of mechanics or dynamics. In the ordinary meaning, "decelerate" is used when the speed decreases. Webster's Encyclopedic Unabridged Dictionary defines the term "decelerate" as follows:

de·cel·er·ate *--v.t.* 1. decrease the velocity of: *He decelerates the bobsled when he nears a curb*. 2. to slow the rate of increase of: *efforts to decelerate inflation*. *-v.i.* 3. to slow down: *The plane decelerated just before landing*.

Thus, the Examiner's allegations on the term "accelerator" ignore the ordinary meaning of the term in the relevant field and the consistent use of the word in the present specification.

The Examiner also alleged as follows:

Furthermore, based on the translation used by the Examiner (attached for convenience), states:

[0034] According to the wiring board of this invention, the nickel cobalt layer 10 is formed directly under the gold layer 11. Since a cobalt component **controls** diffusion of nickel components, some nickel of the nickel layer 9 or the nickel cobalt layer 10 diffuses the inside of the gold layer 11, and it exposes to the surface of the gold layer 11 . . . " (emphasis added).

By this translation, the cobalt component controls diffusion and does not inhibit or slow down the diffusion, thereby controls the rate of diffusion (i.e., an accelerator) and allows for nickel to diffuse into the outer gold layer. Therefore, since materially and functionally, the diffusion accelerators are identical in both the instant application as well as the prior art, Examiner's cobalt in the nickel-cobalt layer is considered an accelerator" by definition.

The translation apparently is a machine translation on which, the Japanese Patent Office specifically notes, that "the translation may not reflect the original precisely." The attorney for the appellant is proficient both in English and Japanese and the translation cited by the Appellant is his corrected version of the machine-translation version. The original text is complex and difficult for a computer to correctly translate.

As to the word "control" translates the Japanese word "抑制する(yokusei-suru)", the Progressive Japanese-English Dictionary, published by Shogakukan, give translations of "restrain; control; check, repress" and give the examples of "control [check] inflation," "control [restrain] one's passions," "in order to control the movements of terrorists," and "I cannot hold back [repress] my discontent any longer." Although Japanese-English Dictionary gives the

translation “control,” the uses of “control” translating “抑制する(yokusei-suru)” is limited to the meaning of restrain, check, or repress. Therefore, the word “control” should have been more accurately translated as “inhibit” “restrain” or “repress.” In the machine translation, the clause “Since a cobalt component **controls (inhibits)** diffusion of nickel components” contradicts its following clause “some nickel of the nickel layer 9 or the nickel cobalt layer 10 diffuses the inside of the gold layer 11, and it exposes to the surface of the gold layer 11.” Thus, the latter clause is clearly erroneous. The Appellants’ attorney’s version, repeated below, is more accurate than the machine translation.

[0034]

According to the wiring board of this invention, because **the nickel cobalt layer 10 is formed directly under the gold layer 11, a cobalt component inhibits diffusion of nickel components, it rarely happens that some nickel of the nickel layer 9 or the nickel cobalt layer 10 diffuses through the gold layer 11**, being exposed on the surface of the gold layer 11 and oxidized to generates a nickel oxide and nickel hydroxide with poor wettability to the solder material 8; thus firm junction to the metallized layer 6 and the solder material 8 is constantly obtained.

Thus, none of the Examiner’s responses to Appellants’ arguments justify the Examiner’s rejection of the claims of the present application.

Therefore, claims 1-20 patentably distinguish over the combination of Levine, Suzuki, Kim et al., Woolhouse et al. and Shiomi et al. as discussed in the appeal brief.

II. CONCLUSION

As discussed in the appeal brief and this reply brief, the present invention as recited in claims 1-20 patentably distinguish over the combination of Levine, Suzuki, Kim et al., Woolhouse et al. and Shiomi et al.

For the foregoing reasons, the Examiner has failed to establish a prima facie case of obviousness in the rejection of the present claims. The Honorable Board is respectfully requested to reverse the rejection of the Examiner.

If this paper is not timely filed, appellants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to Deposit Account No. 50-2866, along with any other additional fees that may be required with respect to this paper.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

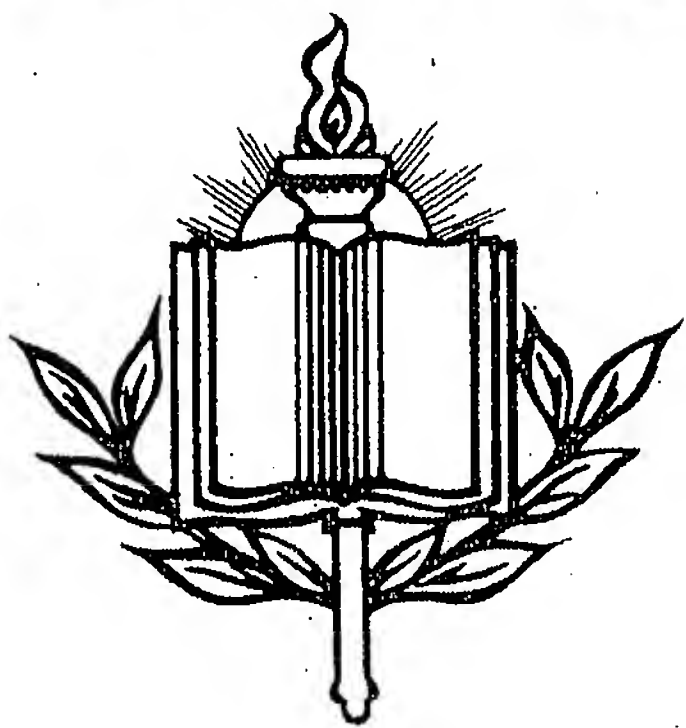
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Attachments: Webster's Encyclopedic Unabridged Dictionary
Progressive Japanese-English Dictionary

WEBSTER'S ENCYCLOPEDIA UNABRIDGED DICTIONARY OF THE ENGLISH LANGUAGE



The dictionary entries are based on the Second Edition of
The Random House Dictionary of the English Language

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phal(a), neut. pl. of *acan-*
-CEPHALOUS) + -AN]

si/), *n.* *Pathol.* an abnor-
mal projection; found in the
lipoproteinemia and certain
[180-85; ACANTHO- + -CYTE]

n/thō sī tō/sis), *n.* a condi-
tion of acanthocytes in
[osis]

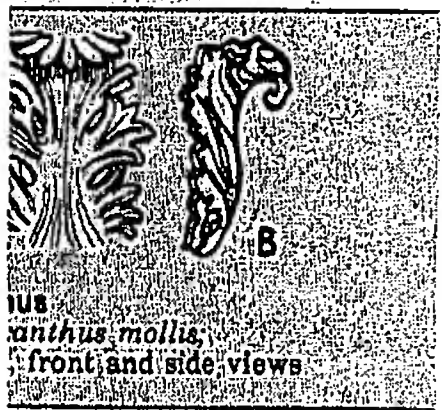
hō/dē en), *n.* any small,
of the extinct order Acan-
[1850-55; < NL *Acan-*
(equiv. to *Acanthod(es)*) a
rickly, spiny; see ACANTH-

d), *adj.* spiny, spinous.

ol/e jē), *n.* *Biol.* the study
of certain spiny-headed
relate to taxonomic classifi-
cation] —*a-can-tho-log-i-cal*
ic/an-thol'o-gist, *n.*

k/en thop/tē rī/ē en), *adj.*
the Acanthopterygii (Acan-
finned fishes, including the
an acanthopterygian fish.
ygi(i) (*acantho-* ACANTHO-
fin + L -i masc. pl. ending)

adj. spinous [ACANTH- +



pl. -thus-es, -thi (-thi). 1.
nus *Acanthus*, of the Medi-
any or toothed leaves and
vers. Cf. *acanthus* family.
as in the Corinthian capi-
his plant. [1610-20; < NL,
t] —*a-can-thine* (ə kan/-

plant family Acanthaceae,
plants and shrubs having
stems of tubular bracted
is dispersed by exploding
a caricature, and shrimp

sp/-), *n.* *Med.* a deficiency
of and tissues. [1905-10;
keless (a- A- + *kaphnós*
from the fact that smoke
cap/n-i-al, *adj.*

ä/ káp pel/lä), *Mus.* 1.
niment. 2. in the style of
[180; < It. in the manner of

hā o/), *It.* ä/ kã prēt/chō),
with whatever expression
according to caprice]

Sp. ä/kä pōöl/kō), *n.* a
ico, on the Pacific. 456,700.
a strong and highly prized
Mexico. [1965-70]

athol. congenital absence
—*a-car-di-ac* (ä kär/dē-

carus.

n., pl. -ses (-sēz/). *Pathol.*
p. mites. 2. a skin disease
scabies. [1820-30; < NL;

er ē-), *n.* a substance or
[1875-80; ACAR(us) + -i-

acarine, esp. a mite of the
or pertaining to an acarid.

rin), *n.* 1. any of numer-
urina, comprising the mites
or pertaining to the order
[1820-30; < NL
quiv. to *Acar(us)* name of
a, neut. pl. of -inus -INE]

ē, nān/yō), *n.* a coastal
ancient Greece; now part
nd Acarnania in modern
nania. —*Ac-ar-na-ni-an*,

resembling a mite or tick.

ellow resin obtained from
es, esp. *Xanthorrhoea has-*
es and lacquers and as a
d *accolides* gum.

n. the branch of zoology
[ACAR(us) + -o- + -LOGY]

fō/bē ē), *n.* *Psychiatry.* a
n is infested with mites or
utilization in order to elimi-
see ACARUS, -o-, -PHOBIA]

a-car-pel-ous (ä kär/pə les), *adj.* *Bot.* having no car-
pels. Also, *a-car/pel-i-ous*. [1875-80; A- + CARPEL +
-ous]

a-car-pous (ä kär/pəs), *adj.* *Bot.* not producing fruit;
sterile; barren. [*< Gk akarpōs*. See A- + -CARPOUS]

ac-a-rus (ak/er əs), *n.*, pl. -a-ri (-ə rī/), a mite, esp. of
the genus *Acarus*. [1650-60; < NL < *Gk akari* mite]

a-cat-a-lect-ic (ä kat/l ek/tik), *Pros.* —*adj.* 1. not
catalectic; complete. —*n.* 2. a verse having the com-
plete number of syllables in the last foot. Cf. *catalectic*,
hypercatalectic. [1580-90; < LL *acatalecticus*. See A- +
CACTALECTIC]

a-cat-a-lep-sy (ä kat/l ep/sē), *n.* *Philos.* an ancient
Skeptical view that no more than probable knowledge is
available to human beings. [1595-1605; < ML *acata-*
lēpsia < *Gk akatalēpsia*, equiv. to *akatalēpt(ein)* to not
comprehend (v. deriv. of *akatalēptos*, incomprehensible,
ungraspable; see A- + CATALEPSY) + -ia -IA] —*a-cat-a-*
lep-tic (ä kat/l ep/tik), *n.*, *adj.*

a-cau-dal (ä kōd/l), *adj.* *Zool.* tailless. Also, *a-cau-*
date (ä kō/dāt). [1855-60; A- + CAUDAL]

ac-au-les-cent (ak/ə les/ent, ä/kō-), *adj.* *Bot.* not
caulescent; stemless; without visible stem. Also, *a-cau-*
line (ä kō/lin, -lin), *a-cau-lose* (ä kō/lōs), *a-cau-lous*
(ä kō/les). [1850-55; A- + CAULESCENT] —*ac-au-les-*
cence, *n.*

a-caus-al (ä kō/zēl), *adj.* having no cause. [A- +
CAUSAL] —*a-caus-al-i-ty*, *n.*

acc., 1. accelerate. 2. acceleration. 3. accept. 4. ac-
ceptance. 5. accompanied. 6. accompaniment. 7. ac-
cordant. 8. according. 9. account. 10. accountant. 11.
accusative.

Ac-cad (ak/ad, ä/käd), *n.* Akkad.

Ac-ca-di-an (ə kã/dē ən, ə kã/-), *n.*, *adj.* Akkadian.

ACCD, American Coalition of Citizens with Disabilities.

ac-cede (ak sed/), *v.t.*, -ced-ed, -ced-ing. 1. to give
consent, approval, or adherence; agree; assent; to accede
to a request; to accede to the terms of a contract. 2. to
attain or assume an office, title, or dignity; succeed (usu-
ally fol. by to): to accede to the throne. 3. *Internat. Law.*
to become a party to an agreement, treaty, or the like,
by way of accession. [1400-50; late ME; to approach,
adapt to < L *accēdere* to approach, assent, equiv. to *ac-*
ce- + *cēdere* to go; see CEDE] —*ac-ced/ence*, *n.* —*ac-*
ced'er, *n.* —*Syn.* 1. See agree.

accel., *accelerando*.

ac-cel-er-an-do (ak sel/ə ran/dō, -rãn/-), *It.* ät che/le-
rãn/dō), *adv.*, *adj.* *Mus.* gradually increasing in speed.
[1835-45; < It < L *accelerandus*, gerundive of *accelerāre*
to speed up. See ACCELERATE]

ac-cel-er-ant (ak sel/ər ent), *n.* 1. something that
speeds up a process. 2. *Chem.* accelerator (def. 5). 3. a
substance that accelerates the spread of fire or makes a
fire more intense: Arson was suspected when police
found accelerants at the scene of the fire. [1915-20; < L
accelerant (s. of *accelerans*) hastening (prp. of *ac-*
celerāre). See ACCELERATE]

ac-cel-er-ate (ak sel/ə rāt/), *v.*, -at-ed, -at-ing. —*v.t.*
1. to cause faster or greater activity, development, prog-
ress, advancement, etc., in: to accelerate economic
growth. 2. to hasten the occurrence of: to accelerate the
fall of a government. 3. *Mech.* to change the velocity of
(a body) or the rate of (motion); cause to undergo accel-
eration. 4. to reduce the time required for (a course of
study) by intensifying the work, eliminating detail, etc.
—*v.i.* 5. to move or go faster; increase in speed. 6. to
progress or develop faster. [1515-25; < L *accelerātus*
speeded up (ptp. of *accelerāre*), equiv. to *ac-* AC- + *celer-*
er-at + -ātus -ATE] —*ac-cel/er-a-ble*, *adj.* —*ac-cel/-*
er-at-ed-ly, *adv.*

accel/erated read'er, *Educ.* a teaching device into
which a page of reading material is inserted and
advanced one line at a time, gradually increasing the speed
to accelerate and improve one's rate of reading compre-
hension.

ac-cel-er-a-tion (ak sel/ə rã/shən), *n.* 1. the act of
accelerating; increase of speed or velocity. 2. a change
in velocity. 3. *Mech.* the time rate of change of velocity
with respect to magnitude or direction; the derivative of
velocity with respect to time. [1525-35; < L *accelerā-*
tiōn- (s. of *accelerātiō*). See ACCELERATE, -ION]

accelera/tion clause, a provision of a mortgage,
loan, or the like that advances the date of payment
under certain circumstances. [1930-35]

accelera/tion coeffi/cient, *Econ.* the ratio of
change in capital investment to the change in consumer
spending. Also called *accelerator, coefficient of ac-*
celeration. Cf. *acceleration principle*.

ac-cel-er-a-tion-ist (ak sel/ə rã/she nist), *n.* *Econ.* a
person, esp. an economist, who advocates or promotes
the acceleration principle. [ACCELERATION + -IST]

accelera/tion of grav/ity, *Physics* the accelera-
tion of a falling body in the earth's gravitational field,
inversely proportional to the square of the distance from
the body to the center of the earth, and varying some-
what with latitude: approximately 32 ft. (9.8 m) per sec-
ond per second. Symbol: *g* Also called *gravity*. [1885-
90]

accelera/tion prin/ciple, *Econ.* the principle that
an increase in the demand for a finished product will
create a greater demand for capital goods. Also called
accelerator prin/ciple. [1940-45]

ac-cel-er-a-tive (ak sel/ə rã/tiv, -ər ə-tiv), *adj.* tend-
ing to accelerate; increasing the velocity of. Also, *ac-cel-*
er-a-tory (ak sel/ər ə-tōr/ē, -tōr/ē). [1745-55; ACCELER-
ATE + -IVE]

ac-cel-er-a-tor (ak sel/ə rã/tər), *n.* 1. a person or
thing that accelerates. 2. *Auto.* a device, usually oper-
ated by the foot, for controlling the speed of an engine.
3. *Brit.* any two- or three-wheeled motor vehicle, as a
motorcycle or motor scooter. 4. *Photog.* a chemical,

usually an alkali, added to a developer to increase the
rate of development. 5. Also called *accelerant*. *Chem.*
any substance that increases the speed of a chemical
change, as one that increases the rate of vulcanization of
rubber or that hastens the setting of concrete, mortar,
plaster, or the like. 6. *Anat. Physiol.* any muscle, nerve,
or activating substance that quickens a movement. 7.
Also called *atom smasher, particle accelerator*. *Phys-*
ics an electrostatic or electromagnetic device, as a cyclo-
tron, that produces high-energy particles and focuses
them on a target. 8. *Econ.* See *acceleration coeffi-*
cient. [1605-15; 1930-35 for def. 7; ACCELERATE + -OR]

ac-cel-er-o-gram (ak sel/ər ə gram/), *n.* a graphic
record in chart form, produced by an accelerograph in
response to seismic ground motions. [1970-75; ACCELER-
(ATION) + -o- + -GRAM]

ac-cel-er-o-graph (ak sel/ər ə graf/, -gräf/), *n.* an
accelerometer containing a pendulum device for measur-
ing and recording ground motions produced by earth-
quakes. [1905-10; ACCELER(ATION) + -o- + -GRAPH]

ac-cel-er-om-e-ter (ak sel/ə rom/i tər), *n.* an instru-
ment for measuring acceleration, as of aircraft or guided
missiles. [1900-05; ACCELER(ATION) + -o- + -METER]

ac-cent (n. ak/sent; v. ak/sent, ak sent/), *n.* 1. promi-
nence of a syllable in terms of differential loudness, or of
pitch, or length, or of a combination of these. 2. degree
of prominence of a syllable within a word and sometimes
of a word within a phrase: *primary accent; secondary ac-*
cent. 3. a mark indicating stress (as ('), or ('), or
('), vowel quality (as French grave ' acute ' circum-
flex '), form (as French la "the" versus là "there"), or
pitch. 4. any similar mark. 5. *Pros.* a regularly recur-
ring stress. b. a mark indicating stress or some other
distinction in pronunciation or value. 6. a musical tone
or pattern of pitch inherent in a particular language ei-
ther as a feature essential to the identification of a vowel
or a syllable or to the general acoustic character of the
language. Cf. *tone* (def. 7). 7. Often, *accents*. a. the
unique speech patterns, inflections, choice of words, etc.,
that identify a particular individual: We recognized his
accents immediately. She corrected me in her usual mild
accents. b. the distinctive style or tone characteristic of
an author, composer, etc.: the unmistakably Brahmsian
accents of the sonata; She recognized the familiar *accents*
of Robert Frost in the poem. 8. a mode of pronuncia-
tion, as pitch or tone, emphasis pattern, or intonation,
characteristic of or peculiar to the speech of a particular
person, group, or locality: *French accent; Southern ac-*
cent. Cf. *tone* (def. 5). 9. such a mode of pronunciation
recognized as being of foreign origin: He still speaks with
an *accent*. 10. *Mus.* a stress or emphasis given to
certain notes. b. a mark noting this. c. stress or empha-
sis regularly recurring as a feature of rhythm. 11.
Math. a. a symbol used to distinguish similar quantities
that differ in value, as in *b'*, *b''*, *b'''* (called *b prime*, *b*
second, or *b double prime*, *b third* or *b triple prime*, re-
spectively). b. a symbol used to indicate a particular unit
of measure, as feet (') or inches (") or minutes (') or seconds
("). c. a symbol used to indicate the order of a derivative
of a function in calculus, as *f'* (called *f prime*) is the first
derivative of a function *f*. 12. words or tones expressive
of some emotion. 13. *accents*, words; language; speech:
He spoke in *accents bold*. 14. distinctive character or
tone: an *accent of whining complaint*. 15. special atten-
tion, stress, or emphasis: an *accent on accuracy*. 16. a
detail that is emphasized by contrasting with its sur-
roundings: a room decorated in navy blue with two red
vases as *accents*. 17. a distinctive but subordinate pat-
tern, motif, color, flavor, or the like: The salad dressing
had an *accent of garlic*. —*v.t.* 18. to pronounce with
prominence (a syllable within a word or a word within a
phrase): to *accent the first syllable of "into"*; to *accent the*
first word of "White House". 19. to mark with a writ-
ten accent or accents. 20. to give emphasis or promi-
nence to; accentuate. [1520-30; < L *accentus* speaking
tone, equiv. to *ac-* AC- + *centus*, comb. form of *cantus*
song (see CANTO); trans. of *Gk prosōidia prosōdy*]
—*ac-cent-less*, *adj.* —*ac-cen-tu-a-ble* (ak sen/chōō ə-
bəl), *adj.*

ac-cent mark, a mark used to indicate an accent,
stress, etc., as for pronunciation or in musical notation.
Cf. *diacritic* (def. 1). [1885-90]

ac-cen-tor (ak sen/tər, ak/sen-), *n.* any oscine bird of
the family Prunellidae, of Europe and Asia, resembling
sparrows but having more finely pointed bills, as the
hedge sparrow. [1815-25; < NL: a genus of such birds,
LL: one who sings with another, equiv. to L *ac-* AC- +
-centor, comb. form of *cantor* singer; see CANTOR]

ac-cen-tu-al (ak sen/chōō əl), *adj.* 1. of or pertaining
to accent or stress. 2. *Pros.* of or pertaining to poetry
based on the number of stresses, as distinguished from
poetry depending on the number of syllables or quanti-
ties. [1600-10; < L *accentu(s)* (see ACCENT) + -AL]
—*ac-cen-tu-al-i-ty*, *n.* —*ac-cen-tu-al-ly*, *adv.*

ac-cen-tu-ate (ak sen/chōō āt/), *v.t.*, -at-ed, -at-ing.
1. to give emphasis or prominence to. 2. to mark or
pronounce with an accent. [1725-35; < ML *accentuātus*
intoned (ptp. of *accentuāre*). See ACCENT, -ATE]

ac-cen-tu-a-tion (ak sen/chōō ā/shən), *n.* 1. an act
or instance of accentuating. 2. something that is accen-
tuated. [1820-30; < ML *accentuātiōn-* (s. of *accentuātiō*)
intoning. See ACCENTUATE, -ION]

ac-cen-tu-a-tor (ak sen/chōō ā/tər), *n.* 1. *Electron-*
ics a circuit or network inserted to provide less loss or
greater gain to certain frequencies in an audio spectrum,
as a preemphasis spectrum. 2. a person or thing that
accentuates. [1875-80; ACCENTUATE + -OR]

ac-cept (ak sept/), *v.t.* 1. to take or receive (some-
thing offered); receive with approval or favor: to accept a
present; to accept a proposal. 2. to agree or consent to;
accede to: to accept a treaty; to accept an apology. 3. to
respond or answer affirmatively to: to accept an invita-
tion. 4. to undertake the responsibility, duties, honors,
etc., of: to accept the office of president. 5. to receive or
admit formally, as to a college or club. 6. to accommo-
date or reconcile oneself to: to accept the situation. 7. to

regard as true or sound; b
cept Catholicism. 8. to
usual. 9. to receive as
Com. to acknowledge, by
ment, and thus to agree to
liberative body) to receiv
of the duty with which
been charged; receive fo
the committee was accep
(something attached; inse
cept a three-pronged-pl
planted organ or tissue) v
lect (def. 7). —*v.i.* 14
position, etc. (sometimes
cepten < MF *accepter* <
-cep- take, comb. form o
—*Syn.* 2. concede. 7.
ject.

—*Usage.* ACCEPT and
as verbs because of their
rapid speech. ACCEPT mi
cept this trophy), while
tain types of damage an
insurance policy).

ac-cept-a-ble (ak sep/ty
thy of being accepted. 2
factory; agreeable; welc
requirements; barely a
mance. 4. capable of be
acceptable levels of radi
ceptabilis. See ACCEPT;
cept-a-ble-ness, *n.* —

ac-cept-ance (ak sep/ty
receiving something off
proval; favor. 3. the a
ceptance of a theory. 4
cepted or acceptable. 5.
an engagement to pay a
when it becomes due, a
drawn. b. an order, dra
accepted as calling for
to pay. [1565-75; ACCEP

accept/ance race,
accept/ance re/gior
a test statistic for which
Cf. *rejection region*.

ac-cept-an-cy (ak sep/ty
of accepting; acceptance
receive; receptiveness.

ac-cept-ant (ak sep/ty
cepting or receiving; n
-ANT]

ac-cep-ta-tion (ak/sə
accepted meaning of a
regard; approval. 3. b
[1400-50; late ME < M

ac-cept-ed (ak sep/ty
ally regarded as norma
tiation of a word; an a
+ -ED] —*ac-cept/ed*
accept/ed ma/sons
(def. 2b).

accept/ed pair/ing
which two or more con
such a manner that ce
but one product is mar
cial or desirable than i

ac-cept-ee (ak/səp/ty
as for military service.

ac-cept-er (ak sep/ty
cepts. [1575-85; ACCEP

ac-cept-ing (ak sep/ty
was always more accep
her teammates. [1570-
ing-ly, *adv.* —*ac-cep-*

ac-cept-ive (ak sep/ty
accept; receptive: She
tions. 2. reasonably s
tive mode of transport
on the model of RECEP

ac-cep-tor (ak sep/ty
person who accepts a
drawee who signs the
ness to pay it when d
om, *accep/tor impu*
in a semiconducting
ture an electron, creat
and thereby changing
crystal. 4. *Chem.* an
pound that combines
thereby profoundly
properties: *electron ac-*
ME, in phrase *accepto*
(< AF *acceptour*) < L
accipere to receive, ge

ac-cess (ak/ses), *n.*
to approach, enter, sp
have access to the file
approachable: The ho
way or means of appr
was a rough dirt ro
through Jesus Christ.
ease. 6. a sudden and
cession. 8. See publi
make contact with or
approach, enter, etc.;
checking accounts this
system. 10. Comput
one part of a compute
tween an external s
—*adj.* 11. Television.
able to the public: Six
[1275-1325; ME *acces*
approach, equiv. to a
+ -tus suffix of v. ac

decasyllabic (dek'ə si lab'ik), *adj.* having ten syllables: a decasyllabic verse. [1765-75; DECA- + SYLLABIC; cf. *décasyllabique*]

decasyllable (dek'ə sil'ə bəl), *n.* a word or line of verse of ten syllables. [1830-40; DECA- + SYLLABLE]

de-thect (dē'kə thekt'), *v.t.* to withdraw one's feelings of attachment from (a person, idea, or object), as anticipation of a future loss: *He de-thected from her father to cope with her impending death.* [DE- + CA- + CT]

deca-thex-is (dē'kə thek'sis), *n.*

ath-lete (di kath'let), *n.* an athlete who takes part in or trains chiefly for a decathlon. [1965-70; b. DE- + LON and ATHLETE]

ath-let (di kath'let), *n.* an athletic contest combining ten different track-and-field events and won by a contestant amassing the highest total score. [1910-20; Gk *athlon* prize, contest]

at-ling (dek'ə ting), *n.* a finishing process for ironing fabric more lustrous, for improving the tactile quality of the nap, and for setting the material to reduce shrinkage. Also, **dec-at-ling** (dek'ə ti'zing). [*< F (ir) to sponge, remove gloss (dē- de- + cair to s; add gloss to < VL *coactire to drive together, v. to L coact(us), ptp. of coagere (co- co- + ag(ere) to s; set in motion + -tus ptp. suffix) + -ire inf. suffix) NG*]

a-tur (di kā'tər), *n.* 1. Stephen, 1779-1820, U.S. officer. 2. a city in central Illinois. 94,081. 3. a city in N Alabama. 42,002. 4. a city in N Georgia, near ita. 18,404.

a-tyl al'cohol (dek'ə tl), *Chem.* decanol. [*< ékat(os) tenth (see DECA-, -TH²) + -YL*]

ay (di kā'), *v.i.* 1. to become decomposed; rot: *ation that was decaying.* 2. to decline in excellence, serenity, health, etc.; deteriorate. 3. *Physics.* (of a radioactive nucleus) to change spontaneously into one or different nuclei in a process in which atomic particles, alpha particles, are emitted from the nucleus, ions are captured or lost, or fission takes place. 4. to cause to decay or decompose; rot: *The damp of the climate decayed the books.* —*n.* 5. decomposition; rot: *Decay made the wood unsuitable for use.* 6. a fall falling into an inferior condition; progressive decay of the decay of international relations; the decay of ancient civilizations. 7. decline in or loss of strength, intellect, etc.: *His mental decay is distressing.* 8. called **disintegration, radioactive decay.** *Physics.* a process in which a nucleus undergoes spontaneous transformation into one or more different nuclei simultaneously emits radiation, loses electrons, or undergoes fission. 9. *Aerospace.* the progressive, acting reduction in orbital parameters, particularly apogee and perigee, of a spacecraft due to atmospheric drag. [1425-75; (v.) late ME *decayen* < ONF *decair*, to de- de- + cair to fall < VL *cadere, for L *e*, (n.) late ME, deriv. of the v.] —**de-cay'a-ble**, **de-cayed-ness** (di kād'nis, -kā'id-), *adj.* —**de-less**, *adj.*

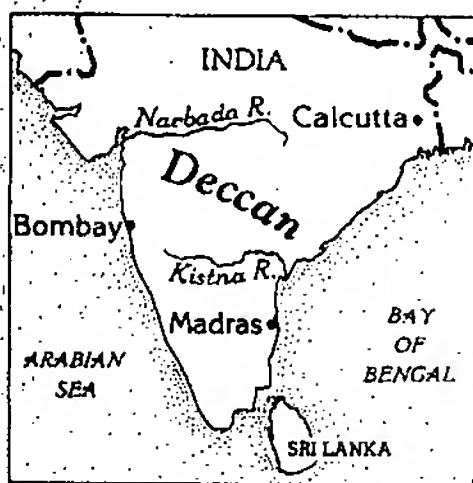
n. 1. degenerate, wither; putrefy. DECAY, DECOMPOSE, DISINTEGRATE, ROT imply a deterioration or falling from a sound condition. DECAY implies either entire or partial deterioration by progressive natural forces. *Teeth decay.* DECOMPOSE suggests the reducing substance to its component elements: *Moisture decomposes some chemical compounds.* DISINTEGRATE emphasizes the breaking up, going to pieces, or going away of anything, so that its original wholeness is lost: *Rocks disintegrate.* ROT is a stronger word DECAY and is esp. applied to decaying vegetable matter which may or may not emit offensive odors: *rot.* 5. putrefaction. 7. deterioration, decay, impairment, dilapidation, degeneration.

constant, *Physics.* the reciprocal of the time. Also called **decay rate, disintegration constant**. [1930-35]

series, *Physics.* See **radioactive series**.

time, *Physics.* the time required for a collection of atoms of a particular radionuclide to decay to one of the initial number equal to 1/e. Cf. **half-life**. Also called **mean life**.

aid (dek'ə), *n.* a British radio navigational aid by which a fix is obtained by determining phase difference in continuous-wave signals from two synchronized signals. Cf. **loran**. [1945-50]



ETYMOLOGY KEY: <, descended or borrowed from; >, blend of, blended; c., cognate with; cf., compare; deriv., derivation; equiv., equivalent; imit., imitative; obl., oblique; r., re- stem; sp., spelling, spelled; resp., respelling, respelled; ranslation; ? , origin unknown; * , unattested; † , probably not. See the full key inside the front cover.

Dec-can (dek'an), *n.* 1. the entire peninsula of India S of the Narbada River. 2. a plateau region in S India between the Narbada and Krishna rivers.

dec'can hemp (dek'an), *kenaf*.

dec'd., deceased.

dece (dēs), *adj.* Slang. great, wonderful. Also, **dees**. [shortening of DECENT]

de-cause (di sēs'), *n.*, *v.*, **-ceased**, **-ceasing**. —*n.* 1. the act of dying; departure from life; death. —*v.i.* 2. to depart from life; die. [1300-50; (n.) ME *deces* < OF < L *dēcessus* departure, death, equiv. to *dēcedere*, var. s. of *dēcedere* to go away (dē- de- + *cēdere* to go; see CEDE) + *-tus* suffix of v. action, with *dt* > s; (v.) late ME *decesen*, deriv. of the n.]

deceased (di sēs'), *adj.* 1. no longer living; dead. —*n.* 2. the deceased, a. the particular dead person or persons referred to. b. dead persons collectively: *to speak well of the deceased.* [1480-90; DECEASE + -ED²] —**Syn.** 1. See **dead**.

dece-dent (di sēs'dnt), *n.* Law. a deceased person. [1590-1600; < L *dēcedent* (s. of *dēcedens*) departing, withdrawing, prp. of *dēcedere*. See DECEASE, -ENT]

dece-dent estate, Law. the estate left by a deceased.

de-ceive (di sēt'), *n.* 1. the act or practice of deceiving; concealment or distortion of the truth for the purpose of misleading; duplicity; fraud; cheating: *Once she exposed their deceit, no one ever trusted them again.* 2. an act or device intended to deceive; trick; stratagem. 3. the quality of being deceitful; duplicity; falseness: *a man full of deceit.* [1225-75; ME *deceite* < AF, OF, n. use of fem. of *deceit*, ptp. of *deceivere* to DECEIVE] —**Syn.** 1. deception, dissimulation. 1, 3. DECEIT, GUILT, HYPOCRISY, DUPLICITY, FRAUD, TRICKERY refer either to practices designed to mislead or to the qualities that produce those practices. DECEIT is the quality that prompts intentional concealment or perversion of truth for the purpose of misleading: *honest and without deceit.* The quality of GUILT leads to craftiness in the use of deceit: *using guile and trickery to attain one's ends.* HYPOCRISY is the pretense of possessing qualities of sincerity, goodness, devotion, etc.: *It was sheer hypocrisy for him to go to church.* DUPLICITY is the form of deceitfulness that leads one to give two impressions, either or both of which may be false: *the duplicity of a spy working for two governments.* FRAUD refers usually to the practice of subtle deceit or duplicity by which one may derive benefit at another's expense: *an advertiser convicted of fraud.* TRICKERY is the quality that leads to the use of tricks and habitual deception: *notorious for his trickery in business deals.* —**Ant.** 3. honesty, sincerity.

de-ceive-ful (di sēt'fəl), *adj.* 1. given to deceiving: *A deceitful person cannot keep friends for long.* 2. intended to deceive; misleading; fraudulent: *a deceitful action.* [1400-50; late ME; see DECEIT, -FUL] —**de-ceive-ful-ly**, *adv.* —**de-ceive-ful-ness**, *n.* —**Syn.** 1. insincere, disingenuous, false, hollow, designing, tricky, wily. 2. illusory, fallacious. —**Ant.** 1. honest. 2. genuine.

de-ceive-a-ble (di sē'və bəl), *adj.* 1. capable of being deceived; gullible. 2. Archaic. misleading; deceptive. [1350-1400; ME; see DECEIVE, ABLE]

de-celve (di sēv'), *v.*, **-celved**, **-celving**. —*v.t.* 1. to mislead by a false appearance or statement; delude: *They deceived the enemy by disguising the destroyer as a freighter.* 2. to be unfaithful to (one's spouse or lover). 3. Archaic. to while away (time). —*v.i.* 4. to mislead or falsely persuade others; practice deceit: *an engaging manner that easily deceives.* [1250-1300; ME *deceiven* < OF *deceivere* < L *dēcipere*, lit., to ensnare, equiv. to *dē- de- + -cipere*, comb. form of *capere* to take] —**de-celve-a-ble-ness**, **de-celve-a-ble-ly**, *n.* —**de-celve-a-bly**, *adv.* —**de-celve-r**, *n.* —**de-celve-ly**, *adv.* —**Syn.** 1. cozen, dupe, fool, gull, hoodwink, trick, defraud, outwit, entrap, ensnare, betray. See **cheat**.

de-celer-ate (dē sēl'ə rāt'), *v.*, **-at-ed**, **-at-ing**. —*v.t.* 1. to decrease the velocity of: *He decelerates the bobsled when he nears a curve.* 2. to slow the rate of increase of: *efforts to decelerate inflation.* —*v.i.* 3. to slow down: *The plane decelerated just before landing.* [1895-1900; DE- + (AC)CELERATE] —**de-cel'er-a-tion**, *n.* —**de-cel'er-a-tor**, *n.*

de-celer-om-e-ter (dē sēl'ə rom'i tər), *n.* a device that measures the rate of deceleration, as of a vehicle. [1920-25; DECELERATION + -O- + -METER]

de-cel'er-on (dē sēl'ə ron'), *n.* Aeron. an aileron that acts as a brake. [b. DECELERATE and AILERON]

de-cem (de'kem; Eng. des'em), *adj.* Latin. ten.

De-cem-ber (di sēm'bər), *n.* the twelfth month of the year, containing 31 days. Abbr.: Dec. [bef. 1000; ME *decembre* < OF < L *december* (s. *decembr-*) the tenth month of the early Roman year, appar. < **dec(em)-mēmbri-*, equiv. to *decem* TEN + **mēmbri-* < *mens-month* + *-ri-* suffix (with *-sr-* > *-br-* and assimilation of nasal)]

De-cem-brist (di sēm'brist), *n.* Russ. Hist. a participant in the conspiracy and insurrection against Nicholas I on his accession in December, 1825. [1880-85; trans. of Russ *dekabrist*. See DECEMBER, -IST]

de-cem-vir (di sēm'vər), *n.*, *pl.* **-virs**, **-vi-ri** (-və ri'). 1. a member of a permanent board or a special commission of ten members in ancient Rome, esp. the commission that drew up Rome's first code of law. 2. a member of any council or ruling body of ten. [1570-80; < L, orig. *decemviri*, equiv. to *decem* TEN + *viri* men] —**de-cem-vi-ral**, *adj.*

de-cem-vi-rate (di sēm'vər it, -və rāt'), *n.* 1. a

board or group of decemvirs. 2. the office or government of decemvirs. [1610-20; < L *decemviratus*. See DECEM, -ATE²]

de-cen-cy (dē'sən sē), *n.*, *pl.* **-cies**. 1. the state or quality of being decent. 2. conformity to the recognized standard of propriety, good taste, modesty, etc. 3. **de-cencies**, a. the recognized standards of decent or proper behavior; proprieties: *The least you can expect from them is some respect for the decencies.* b. the requirements or amenities for decent or comfortable living: *to be able to afford the decencies.* [1560-70; < L *decentia* comeliness, decency, equiv. to *decent-* (s. of *decens*) fitting (see DECENT) + *-ia* n. suffix] —**Syn.** 2. decorum, respectability, gentility.

de-cen-na-ry (di sēn'ə rē), *n.*, *pl.* **-ries**, *adj.* —*n.* 1. a decade. —*adj.* 2. pertaining to a period of ten years; decennial. [1815-25; < L *decenn(is)* of ten years (dec(em) TEN + *-ennis*, comb. form of *annus* a year) + -ARY]

de-cen-ni-al (di sēn'ē əl), *adj.* 1. of or for ten years. 2. occurring every ten years. —*n.* 3. a decennial anniversary. 4. its celebration. [1650-60; < L *decenni(um)* a period of ten years (*decenn(is)* DECENNARY + *-ium* -IUM) + -AL'] —**de-cen-ni-al-ly**, *adv.*

de-cen-ni-um (di sēn'ē əm), *n.*, *pl.* **-cen-ni-ums**, **-ni-a** (-sēn'ē ə), a period of ten years; a decade. [1675-85; < L; see DECENNIAL]

de-cent (dē'sent), *adj.* 1. conforming to the recognized standard of propriety, good taste, modesty, etc., in behavior or speech. 2. respectable; worthy: *a decent family.* 3. adequate; fair; passable: *a decent wage.* 4. kind; obliging; generous: *It was very decent of him to lend me his watch.* 5. suitable; appropriate: *She did not have a decent coat for the cold winter.* 6. of fairly attractive appearance: *a decent face.* 7. Informal. wearing enough clothing to appear in public. 8. Slang. great; wonderful. [1485-95; < L *decent-* (s. of *decens*) fitting (prp. of *dēcere* to be fitting; see -ENT), akin to *decus* honor] —**de-cent-ly**, *adv.* —**de-cent-ness**, *n.* —**Syn.** 1. seemly, proper, decorous. 5. apt, fit, becoming. —**Ant.** 1. unseemly. 5. inappropriate.

de-cen-ter (dē sēn'tər), *v.t.* 1. to put out of center. 2. to make eccentric. Also, esp. Brit., **de-centre**. [1885-90; DE- + CENTER]

de-cen-tral-ize (dē sēn'trə līz'), *v.*, **-ized**, **-izing**. —*v.t.* 1. to distribute the administrative powers or functions of (a central authority) over a less concentrated area: *to decentralize the national government.* 2. to disperse (something) from an area of concentration: *to decentralize the nation's industry.* —*v.i.* 3. to undergo decentralization: *The city government is looking for ways to decentralize.* Also, esp. Brit., **de-cen'tral-ise**. [1850-55; DE- + CENTRALIZE] —**de-cen'tral-ist**, *n.* —**de-cen'tral-iza-tion**, *n.*

de-cent-re (dē sēn'tər), *v.t.*, **-tred**, **-tring**. Chiefly Brit. to decentralize.

de-cep-tion (di sēp'shən), *n.* 1. the act of deceiving; the state of being deceived. 2. something that deceives or is intended to deceive; fraud; artifice. [1400-50; late ME *deception* < OF < LL *dēception-* (s. of *dēceptio*) equiv. to L *dēcept(us)* (ptp. of *dēcipere*; see DECEIVE) + -iōn -iōn]

de-cep-tion bed, any of various kinds of concealed or disguised beds designed in the 18th century.

de-cep-tion ta-ble, a table of the 18th century made so as to conceal its true function, as in serving as a cabinet for a chamber pot.

de-cep-tive (di sēp'tiv), *adj.* 1. apt or tending to deceive: *The enemy's peaceful overtures may be deceptive.* 2. perceptually misleading: *It looks like a curved line but it's deceptive.* [1605-15; < ML *dēceptivus*, equiv. to L *dēcept(us)* (see DECEPTION) + *-ivus* -IVE] —**de-cep-tive-ly**, *adv.* —**de-cep-tive-ness**, *n.* —**Syn.** 1. delusive, fallacious, specious.

de-cep-tive ca/dence, Music. a cadence consisting of a dominant harmony followed by a resolution to a harmony other than the tonic.

de-cer-e-brate (v. dē sēr'ə brāt'; n. dē sēr'ə brāt'), *v.*, **-brat-ed**, **-brat-ing**, *n.* —*v.t.* 1. Surg. to remove the cerebrum. —*n.* 2. a decrebrate animal. 3. a person who, because of brain injury, exhibits behavior characteristic of a decrebrate animal. [1895-1900; DE- + CEREBR- + -ATE'] —**de-cer'e-brat-ion**, *n.*

de-cern (di sūrn'), *v.i.* 1. Scots Law. to enter a judicial decree. —*v.t.* 2. Archaic. to discern. [1400-50; late ME *decernen* to decide < OF *decerner* < L *dēcernere* equiv. to *dē- de- + cernere* to separate, decide]

de-cer-ti-fy (dē sūr'tē fī'), *v.t.*, **-fied**, **-fy-ing**. to withdraw certification from. [1915-20; DE- + CERTIFY] —**de-cer-ti-fi-ca-tion** (dē sūr'tē fē kā'shən; dē sērtif'ē-), *n.*

de-chlor-i-nate (dē klōr'ə nāt', -klōr'-), *v.t.*, **-at-ed**, **-at-ing**. Chem. to remove the chlorine from (a substance, as water): *to dechlorinate tap water for use in an aquarium.* [1940-45; DE- + CHLORINATE] —**de-chlor-i-na-tion**, *n.*

decl-, a combining form meaning "tenth," used in words denoting units of the metric system (*deciliter*); on this model, extended to other systems (*decibel*). Cf. *deca-* [*< F déci- < L decimus* tenth]

dec-i-bar (des'ə bār'), *n.* Physics. a centimeter-gram-second unit of pressure, equal to 1/10 bar or 100,000 dynes per square centimeter. [1905-10; DECI- + BAR']

dec-i-bel (des'ə bel', -bəl), *n.* Physics. 1. a unit used to express the intensity of a sound wave, equal to 20 times the common logarithm of the ratio of the pressure pro-

duced by the sound to 0.0002 microns being the base 10 used to compare the c or currents db 1925-2

de-clid-a-b (dē'klid-ə b), *n.* 2. the proper the axiomatic 1885-95

de-clide (dē'klid), *v.* of concluding ing victory favor of d thing in d to bring e The new e thing in d the plaint preference oiden < N dē- de- cid'er n

de-clid-er (dē'klid-ər), *n.* upon a pu is to mak the way t show firm motion: 1 then to st maintain

de-clid-er-ary (dē'klid-ər-ē), *adj.* 2. 1. terminated: DECIDE + -ary

de-clid-er-ness (dē'klid-ər-nis), *n.* —**Syn.** 1. pronoun hesitating

de-clid-in (dē'klid-in), *v.* dispute o the decid for as to DECIDE + -in

de-clid-u (dē'klid-u), *n.* 1. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675.

Shogakukan

PROGRESSIVE

Japanese-English Dictionary

小学館

プログレッシブ

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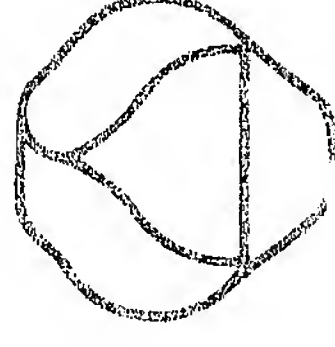
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小林ひろみ

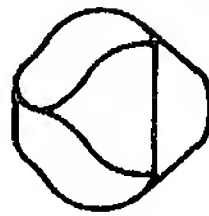
天満美智子

吉本直志子

Peter Martin



To the Memory of
Professor Doi Kōchi



「メビウスの帯(Möbius band)」
長方形の帯を1度ねじって両端を
結びつけて作ったもの。あらゆる
方向に自由に広がり、永遠に継続
する。国際語としての英語の広か
りと、言葉の結びつきを重視した
本辞典のシンボルマークです。

まえがき

本辞典の起源は四半世紀以上も前にさかのぼる。当時津田塾大学英文学科主任
兼付属語学研究所長であった土居光知教授の、和英辞典に対する新しい構想のも
とにこの仕事は始まった。当時の和英辞典は日英語ともに難解な言葉を並べこ
とが多く、もう一度英英辞典や英和辞典で語義や用例を確かめねばならなかった。
土居先生は日英の基本語の比較分析をもとに、紙面を増すことなく和英、英英の
二冊分の機能を合わせもつ辞典を構想されたのである。この方針はその後もずっ
と一貫して、私たちを支えてきた。

和英辞典はなによりも良い英語を書くことを目標としなければならない。文法
的に正しい英語 (correct English) を書くことも必要であるが、それ以上に良い
英語 (good English) を書くことが大切である。そのためには、まず日英語の言
語習慣の違いを充分に知る必要がある。例えば日本語では「ぶらぶら歩く」「気取
って歩く」「とぼとぼ歩く」など、「歩く」という一つの動詞に副詞または副詞句
をつけて歩き方を示す。しかし英語では “walk” に副詞をつけるのではなく、
“stroll” “strut” “trudge” など、動詞そのものによって歩き方を示すのである。
このような表現に英語本来の特質、その活力が存するのであり、これを認識して
こそ good English に到達できるのである。本書はこれを読者に伝え、真に英語
らしい英語とは何かを示すことに努めた。

作業の第一歩は日本語の語義立てから始まった。適当な英訳を見つけようとす
る際、先ず日本語の意味を明らかにしなければならない。本辞典では、重要な語
については原義をI、比喻の意味をIIに分けるなど、語義分けを厳密にし、日本
語の概念を明確にするように努めた。日本語を言語体系の異なる英語と比較分析
することにより、結果的には、従来の国語辞典には見られなかったような日本語
の特質が多く浮かび上がってきたと自負している。

収録した日本語の語彙は、日常生活の表現に必要な基本語、新聞・雑誌に登場
する各分野の専門用語、身近な動植物の名、新語など7万余にのぼる。これは一
般の国語辞典に相当する語彙であり、しかも最も up-to-date でかつ広範囲な現
代日本語の集積となっている。

見出し語や用例の英訳に関しては、現在使われている自然な英語になるように
心掛けた。また訳語の意味の差異、使い分けを簡潔に説明し、使用上の正確さを
期した。しかし本書を特徴づけるのは、なんといっても、10万にのぼる豊富な用
例にある。生きた言語は文脈によって用法が異なる。本書では日本語のいろい
ろな活用を考え、代表的な文型を例証することによって、すぐにも応用できるよ

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